

REFERENCES

- Alexopoulos, C. J. dan C. W. M. (1979). *Introductory Micology* (3rd editio). New, York.: John Wiley and Sons.
- Alexopoulos, C. J., & Mims., C. W. (1981). *Introductory Micology* (3rd editio). New, York.: John Wiley and Sons.
- Alfarra, H. Y., & Omar, M. N. (2012). Microbial Transformation of Natural Products
Microbial Transformation of Natural Products, 2012.
- Ali, S., & al. (2002). Production of citric acid by *Aspergillus niger* using cane molasses in a stirred fermentor, 5(3).
- Aljewari, H. S., & al. (2010). High Efficiency , Selectivity against Cancer Cell Line of Purified L-Asparaginase from Pathogenic *Escherichia coli*. *World Academy of Science, Engineering and Technology International Journal of Medical, Health, Biomedical, Bioengineering and Pharmaceutical Engineering*, 4(May).
- Anas, Y., Faozi, I., & Suharjono. (2015). POTENSI FRAKSI n-HEKSAN EKSTRAK ETANOL RIMPANG LENGKUAS [*Alpinia galanga* (L.) Swartz.] DALAM MENINGKATKAN KUALITAS SPERMA DAN SPERMATOGENESIS, 7–19.
- Andria, A., Dewi, W., & al. (2014). Biotransformation of Protoberberine Alkaloids by the Endophytic Fungus *Coelomycetes AFKR-3* Isolated from Yellow Moonseed Plant (*Archangelisia flava* (L.) Merr.), 38 – 43. <https://doi.org/10.1016/j.proche.2014.12.004>
- Aristantika, R. I. A. (2019). Sinergisme fraksi etil asetat lengkuas dengan fraksi etil asetat lidah buaya, kulit batang krangan, daun sembung, dan biji kopi terhadap sel t47d.
- Asri, A., & Winarko, S. (2016). Antiproliferative Activity by Ethanolic Extract of Red *Alpinia galanga* (L) Willd in Inoculated Breast Carcinoma Cells of C3H Mice, 5(4), 1–9. <https://doi.org/10.9734/JAMPS/2016/22301>
- Atun. (2014). Metode Isolasi dan Identifikasi Struktur Senyawa Organik Bahan Alam, 8, 53–61.
- Azwanida NN. (2015). Medicinal & Aromatic Plants A Review on the Extraction Methods Use in Medicinal Plants , Principle , Strength and Limitation, 4(3), 3–8.
<https://doi.org/10.4172/2167-0412.1000196>
- Baradwaj, R. G., & et al. (2017). ScienceDirect Novel purification of 1 ' S-1 ' - Acetoxychavicol acetate from *Alpinia galanga* and its cytotoxic plus antiproliferative activity in colorectal adenocarcinoma cell line SW480. *Biomedicine et Pharmacotherapy*, 91, 485–493. <https://doi.org/10.1016/j.biopha.2017.04.114>
- Berthod, A., & Carda-broch, S. (2004). Determination of liquid – liquid partition coefficients

- by separation methods, *1037*, 3–14. <https://doi.org/10.1016/j.chroma.2004.01.001>
- CCRC. (2009a).
- CCRC. (2009b).
- CE, O., & al. (2017). Cytotoxic, Antiproliferative and Apoptotic Effects of Perillyl Alcohol and Its Biotransformation Metabolite on A549 and HepG2 Cancer Cell Lines, *17*(9), 1243–1250. <https://doi.org/10.2174/1871520617666170103093923>
- Chouni, A., & Paul, S. (2018). A Review on Phytochemical and Pharmacological Potential of *Alpinia galanga*, *10*(1), 9–15.
- Chudiwal, A. K., & al. (2010). *Alpinia galanga* Willd .– An overview on phyto-pharmacological properties, *1*(June), 143–149.
- Da'i, M., & al. (2019). Selectivity Index of *Alpinia galanga* Extract and 1'-Acetoxychavicol Acetate on Cancer Cell Lines, (June), 95–100.
- Demyttenaere, J. C. R., & al. (2000). Biotransformation of geraniol , nerol and citral by sporulated surface cultures of *Aspergillus niger* and *Penicillium* sp ., *55*.
- Doyle, A., & Griffiths, J. B. (2000). *Cell and Tissue Culture: Laboratory Procedures in Biotechnology*. (A. Doyle & J. B. Griffiths, Eds.).
- Dwidjoseputro, D. (1984). *Dasar-dasar Mikrobiologi*. Djambatan, Malang.
- Fardiaz S. (1989). *Mikrobiologi Pangan. Penelaah: F. G. Winarno, Departemen Pendidikan dan Kebudayaan Direktorat Jenderal Pendidikan Tinggi Pusat Antar Universitas Pangan dan Gizi Institut Pertanian Bogor, Bogor*. Bogor.
- Francisco, P.-P., Isela, L., & Carlos, B. (2009). Miniaturized preconcentration methods based on liquid–liquid extraction and their application in inorganic ultratrace analysis and speciation: A review, *64*(1), 1–15. <https://doi.org/10.1016/j.sab.2008.10.042>
- G, R. S., & Monisha, S. (2015). Pharmacology of an Endangered Medicinal Plant *Alpinia galanga* – A Review . *Research Journal of Pharmaceutical , Biological and Chemical Sciences*, *6*(499), 499–511.
- Hegazy, M. F., & al. (2015). Microbial biotransformation as a tool for drug development based on natural products from mevalonic acid pathway : A review. *Journal of Advanced Research*, *6*(1), 17–33. <https://doi.org/10.1016/j.jare.2014.11.009>
- Indrawati GandjarRoosheroe, W. S. (2014). *MIKOLOGI : Dasar dan Terapan (Edisi Revisi)*. Indonesia, Jakarta.
- Inggrid, D. H. M., & Suharto, I. (2012). Fermantasi glukosa oleh *Aspergillus Niger* menjadi Asam Glukonat.
- Ito, K., & et al. (2005). 1'-Acetoxychavicol Acetate Is a Novel Nuclear Factor K B

- Inhibitor with Significant Activity against Multiple Myeloma In vitro and In vivo, (10), 4417–4425.
- Komsta, Ł., & et al. (2017). The experimental design approach to eluotropic strength of 20 solvents in thin-layer chromatography on silica gel, (2016), 1–4.
<https://doi.org/10.1016/j.chroma.2017.01.010>
- Kostrzewa-Susłow, E., & Janeczko, T. (2011). Microbial Transformations of 7-Hydroxyflavanone, 8. <https://doi.org/10.1100/2012/254929>
- Kuntorini, E. M. (2005). BOTANI EKONOMI SUKU ZINGIBERACEAE SEBAGAI OBAT, 2(February 2005), 25–36.
- Lagos-quintana, M., & et al. (2012). Identification of Novel Genes Coding for Small Expressed RNAs, 853(2001). <https://doi.org/10.1126/science.1064921>
- Ling, Z., & al. (2012). Two new phenylpropanoids isolated from the rhizomes of *Alpinia galanga*. *Chinese Journal of Natural Medicines*, 10(5), 370–373.
[https://doi.org/10.1016/S1875-5364\(12\)60074-0](https://doi.org/10.1016/S1875-5364(12)60074-0)
- López-Gómez, M., & Al. (2013). Cancer in developing countries : The next most preventable pandemic . The global problem of cancer. *Critical Reviews in Oncology / Hematology*, 88(1), 117–122. <https://doi.org/10.1016/j.critrevonc.2013.03.011>
- Mahmoud, Y. A., & al. (2008). and the Characterization of Two Newly Formed Flavone Biotransformation by *Aspergillus niger* and the Characterization of Two Newly Formed Metabolites, 8093.
- Marć, M. A., & al. (2018). In Vitro Biotransformation , Safety , and Chemopreventive Action of Novel 8-Methoxy-Purine-2 , 6-Dione Derivatives, 124–139.
<https://doi.org/10.1007/s12010-017-2527-z>
- Newman, D. J., & et al. (2003). Natural Products as Sources of New Drugs over the Period 1981 - 2002, 1022–1037.
- Okubo, Y., & al. (2008). Liquid–liquid extraction for efficient synthesis and separation by utilizing micro spaces, 63(16), 4070–4077. <https://doi.org/10.1016/j.ces.2008.05.017>
- Pang, X., Zhang, L., Lai, L., Chen, J., Yi, Z., Zhang, J., ... Liu, M. (2011). 1 # - Acetoxychavicol acetate suppresses angiogenesis-mediated human prostate tumor growth by targeting VEGF-mediated Src-FAK-Rho GTPase-signaling pathway, 32(6), 904–912. <https://doi.org/10.1093/carcin/bgr052>
- Pelczar M., & dan E.C.S.C. (2005). *Dasar-dasar mikrobiologi*. UI Press, Jakarta.
- Petit, P., & al. (2009). Novel antimicrobial secondary metabolites from a *Penicillium* sp . isolated from Brazilian cerrado soil, 12(4). <https://doi.org/10.2225/vol12-issue4-fulltext->

- Posma, M., Artha, P. J., & Guchi, H. (2013). FEKTIVITAS *Aspergillus niger* DAN *Penicillium* sp. DALAM MENINGKATKAN KETERSEDIAAN FOSFAT DAN PERTUMBUHAN TANAMAN JAGUNG PADA TANAH ANDISOL, *1*(4), 1277–1287.
- Pratama, N. P., Wulandari, S., Nugroho, A. E., Fakhrudin, N., Astudi, P., & Sudarosono. (2018). Tylophorine Abrogates G2 / M Arrest Induced by Doxorubicine and Promotes Increased Apoptosis in T47D Breast Cancer Cells, *19*, 3065–3069.
<https://doi.org/10.31557/APJCP.2018.19.11.3065>
- Rangan, S. G. L. (2013). *Alpinia* : the gold mine of future therapeutics, 173–185.
<https://doi.org/10.1007/s13205-012-0089-x>
- Rengarajan, T., & al. (2013). Cancer Preventive Efficacy of Marine Carotenoid Fucoxanthin: Cell Cycle Arrest and Apoptosis, 4978–4989. <https://doi.org/10.3390/nu5124978>
- Rusmalin, H. (2003). *alpinia1.pdf. Aktivitas Anti-Kanker Ekstrak Rimpang Lengkuas Lokal (Alpinia Galanga (L) Sw) Pada Alur Sel Kanker Manusia Serta Mencit Yang Ditransplantasi Dengan Sel Tumor Primer,. Institut Pertanian Bogor.*
- Samarghandian, S., & al. (2014). Antiproliferative activity and induction of apoptotic by ethanolic extract of *Alpinia galanga* rhizome in human breast carcinoma cell line, *14*(1), 1–9. <https://doi.org/10.1186/1472-6882-14-192>
- Sasidharan, S., & al. (2011). EXTRACTION , ISOLATION AND CHARACTERIZATION OF BIOACTIVE COMPOUNDS FROM PLANTS ' EXTRACTS Institute for Research in Molecular Medicine (INFORM), Universiti Sains Malaysia , Minden 11800 , 8, 1–10.
- Shinde, R. N., & Nagar, S. (2014). AMYLASE PRODUCTION ON SOLID STATE FERMENTATION BY WILD TYPE AND, *5*(7), 2703–2713.
[https://doi.org/10.13040/IJPSR.0975-8232.5\(7\).2703-13](https://doi.org/10.13040/IJPSR.0975-8232.5(7).2703-13)
- Sieuwerts, A. M., & al. (1995). The MTT Tetrazolium Salt Assay Scrutinized : How to Use this Assay Reliably to Measure Metabolic Activity of Cell Cultures in vitro for the Assessment of Growth Characteristics , IC 50 -Values and Cell Survival, *33*(11), 813–823.
- Silva1, P. L. da, Vinicius Cestari do Amaral, V. G., Maria Magdalena Montt Guevara , Paolo Mannella, E. C. B., & Soares-Jr Jose Maria, T. S. (2015). Prolactin Promotes Breast cancer cell Migration through actin cytoskeleton remodeling, *6*(December), 1–8.
<https://doi.org/10.3389/fendo.2015.00186>

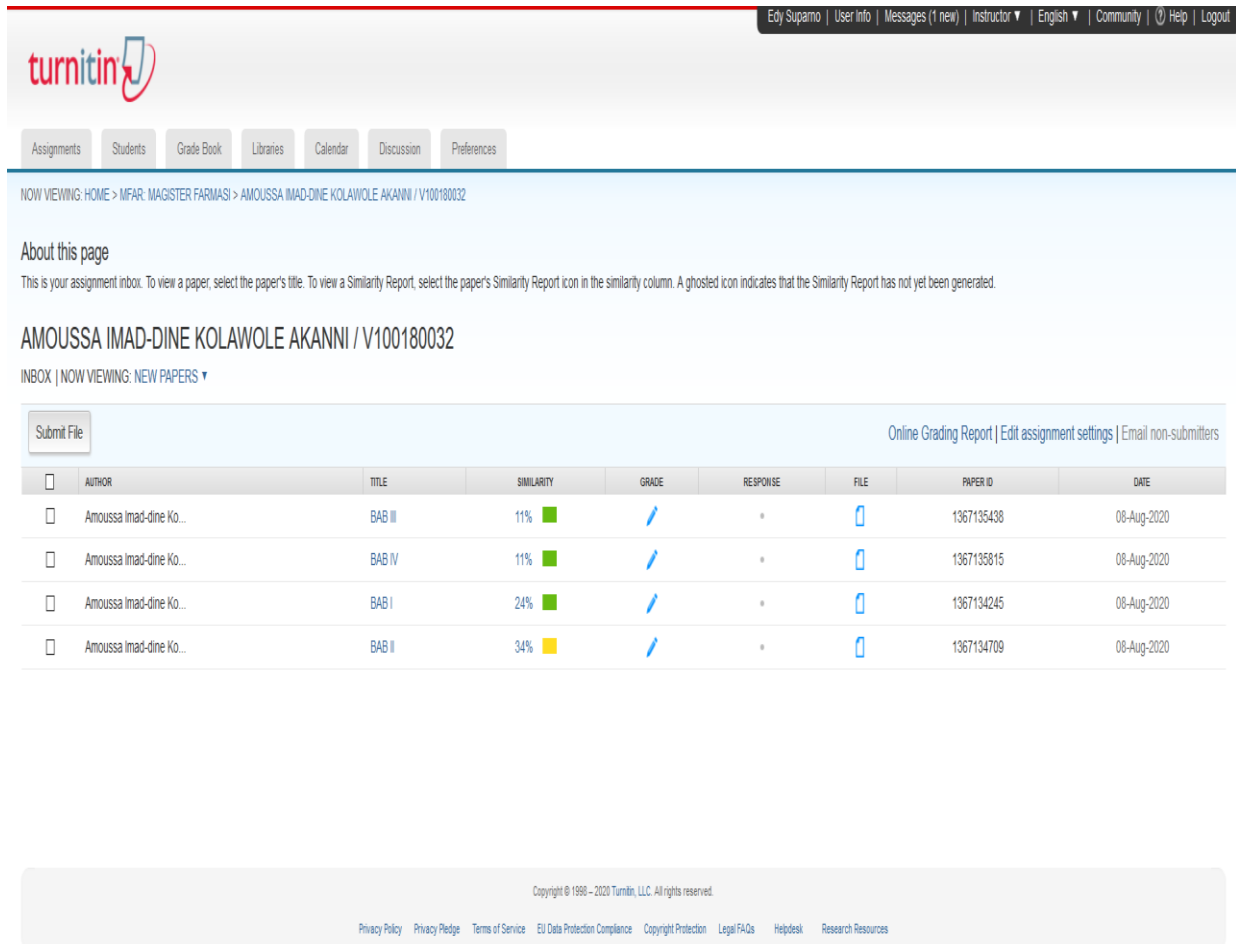
- Silverstein, R. M., Webster, F. X., & Kiemle, D. J. (2005). *Silverstein - Spectrometric Identification of Organic Compounds* (7th ed.). State University of New York College of Environmental Science & Forestry.
- Solieri, L., & al. (2013). *Zygosaccharomyces sapae* sp. nov., isolated from Italian traditional balsamic vinegar, 364–371. <https://doi.org/10.1099/ijls.0.043323-0>
- Sousa, I. P. De, Teixeira, M. V. S. et, & al. (2018). An Overview of Biotransformation and Toxicity of Diterpenes. <https://doi.org/10.3390/molecules23061387>
- su Ki Liew, & al. (2017). anti-migration effects of hemi-synthetic 1'-S-1'-acetoxychavicol acetate analogs on MDA-MB-231 breast cancer cells, 2763–2776.
- Visagie, C. M., Houbraeken, J., & al. (2014). Studies in Mycology. *Studies in Mycology*, 78(2000), 343–371. <https://doi.org/10.1016/j.simyco.2014.09.001>
- Wachmann, K., Pop, C., Raam, B. J. van, Drag, M., Snipas, S. J., Zmasek, C., ... Riedl, S. J. (2011). NIH Public Access, 49(38), 8307–8315. <https://doi.org/10.1021/bi100968m.Activation>
- Widiyastuti, Y., & et al. (2019). Cytotoxic activities of ethanolic and dichloromethane extract of leaves, stems, and flowers of Jarong [*Stachytarpheta jamaicensis* (L.) Vahl.] on HeLa and T47D cancer cell line Cytotoxic Activities Of Ethanolic And Dichloromethane Extract Of Leaves, 030011.
- Xu, F., Zhong-mei, Z. O. U., Zhi-yong, C. H. U., & al. (2011). Biotransformation of Taxanes. *Chinese Journal of Natural Medicines*, 9(6), 466–472. <https://doi.org/10.3724/SP.J.1009.2011.00466>
- Yu, S., Kim, T., Hyun, K., & Kang, K. (2017). Biochemical and Biophysical Research Communications The T47D cell line is an ideal experimental model to elucidate the progesterone-specific effects of a luminal A subtype of breast cancer. *Biochemical and Biophysical Research Communications*, 1–7. <https://doi.org/10.1016/j.bbrc.2017.03.114>
- Zaeoung, S., & et al. (2005). Cytotoxic and free radical scavenging activities of Zingiberaceous rhizomes, 27(Jul.-Aug. 2005).

OTHER SOURCES

National Center for Biotechnology Information. PubChem Database. 1'-Acetoxychavicol acetate, CID=119104, https://pubchem.ncbi.nlm.nih.gov/compound/1_-Acetoxychavicol-acetate (accessed on Sept. 27, 2019)

World Health Organization. Cancer fact sheet <http://www.who.int/mediacentre/factsheets/fs297/en/>.

<https://www.etsy.com/listing/497011602/3-rhizomes-greater-galangal-alpinia>.



The screenshot displays the Turnitin user interface. At the top, there is a navigation bar with the Turnitin logo and a user menu for 'Edy Suparno' containing links for 'User info', 'Messages (1 new)', 'Instructor', 'English', 'Community', 'Help', and 'Logout'. Below this is a secondary navigation bar with tabs for 'Assignments', 'Students', 'Grade Book', 'Libraries', 'Calendar', 'Discussion', and 'Preferences'. The main content area shows the user's current location: 'NOW VIEWING: HOME > MFAR: MAGISTER FARMASI > AMOUSSA IMAD-DINE KOLAWOLE AKANNI / V100180032'. A section titled 'About this page' explains the assignment inbox. Below this, the user's name and ID are displayed. A 'Submit File' button is visible on the left, and links for 'Online Grading Report', 'Edit assignment settings', and 'Email non-submitters' are on the right. The central part of the page features a table with columns for 'AUTHOR', 'TITLE', 'SIMILARITY', 'GRADE', 'RESPONSE', 'FILE', 'PAPER ID', and 'DATE'. Four papers are listed, all by 'Amoussa Imad-dine Ko...'. The similarity percentages are 11%, 11%, 24%, and 34%, each accompanied by a green or yellow bar. The grades are represented by blue pencil icons. The dates for all papers are '08-Aug-2020'. At the bottom, a footer contains copyright information and various policy links.













<input type="checkbox"/>	AUTHOR	TITLE	SIMILARITY	GRADE	RESPONSE	FILE	PAPER ID	DATE
<input type="checkbox"/>	Amoussa Imad-dine Ko...	BAB III	11% 		*		1367135438	08-Aug-2020
<input type="checkbox"/>	Amoussa Imad-dine Ko...	BAB IV	11% 		*		1367135815	08-Aug-2020
<input type="checkbox"/>	Amoussa Imad-dine Ko...	BAB I	24% 		*		1367134245	08-Aug-2020
<input type="checkbox"/>	Amoussa Imad-dine Ko...	BAB II	34% 		*		1367134709	08-Aug-2020

Figure 31: Turnitin result